ABSTRACT OF THE DISCLOSURE

An engine starter system includes a current switching device for controlling an armature current, a shorting relay for electrically shorting the current switching device, and an electronic control circuit. In a normal starting mode, the electronic control circuit gradually increases the armature current by varying a duty ratio of the current switching device. When the armature current becomes larger than an allowable current value of the current switching device, an armature is energized through the shorting relay. In an economy-running starting mode, the armature current is controlled through the current switching device until the engine is completely started.